

1 WHAT IS CLAIMED IS:

1 1. A method for manufacturing an insert for a combustion head gasket
2 includes the steps of: (a) providing a mold apparatus having an upper mold section
3 and a lower mold section, said lower section defining a cavity adapted to receive a
4 blank metal substrate; (b) placing a metal substrate into said cavity; (c) closing said
5 upper mold section against the substrate to hold the insert in place under a first
6 applied force; (d) applying a second force greater than the first to shape the insert; (e)
7 supplying elastomeric material to selected predetermined portions of the blank metal
8 substrate; and (f) curing the elastomeric material.

1 2. The method of claim 1 wherein said insert is adapted to seal an engine
2 oil flow aperture of said combustion head gasket, said insert including a body portion
3 adapted for registration with the oil flow aperture.

1 3. The method of claim 2 wherein said insert comprises a metallic body
2 and includes an elastomeric sealing bead bonded to said body, wherein said body is
3 plastically deformed via said application of said second force to shape said insert.

1 4. The method of claim 3 wherein said insert is manufactured in a single
2 mold process that includes said shaping of said insert body and said molding of said
3 bead.

1 5. The method of claim 4 wherein said elastomeric sealing bead bonded
2 to said body comprises a sealing portion disposed about a peripheral edge of said
3 body portion of said insert body.

1 6. The method of claim 5 wherein said sealing body portion of said insert
2 defines a closed loop, and wherein said insert further comprises radially extending
3 arms provided for attachment of said insert to a combustion head gasket.

1 7. The method of claim 6 wherein at least one of said arms comprises an
2 offset elbow.

1 8. The method of claim 7 wherein said elbow provides a connection
2 between said arm and a shoulder portion of said insert, wherein said shoulder portion
3 is contiguous with said peripheral edge of said closed loop portion of said insert.

1 9. The method of claim 8 wherein said closed loop is generally non-
2 circular.

1 10. The method of claim 9 wherein said mold apparatus comprises die
2 inserts for forming said insert.

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